

What Is Claimed Is:

1. A diode, in particular a press-fit diode, comprising a chip which is connectable via solder layers to a first part, in particular a head wire, and to a second part, in particular a base; a plastic sheathing which includes a sleeve and is situated at least in the chip area and forms a mechanical connection, the second part at least partially enclosing the plastic sheathing and forming a housing with the plastic sheathing, and at least one undercut (B) being provided which extends into the plastic sheathing,
wherein a gap (A), (A') is provided between the sleeve (2) of the plastic sheathing (7) and the base (1).
2. The diode, in particular the press-fit diode, as recited in Claim 1,
wherein the housing or base is made of an electrically and/or thermally conductive material.
3. The diode, in particular the press-fit diode, as recited in Claim 1 or 2,
wherein the height a of the base is selected in such a way as to achieve an adequate clamping of the base and head wire and is at least 0.5 mm to 0.8 mm.
4. The diode, in particular the press-fit diode, as recited in Claim 1, 2 or 3,
wherein the housing has bevels or lead-in chamfers C, D which enable the diode to be pressed into a rectifier on both sides.
5. The diode, in particular the press-fit diode, as recited in one of the preceding claims,
wherein the plastic sheathing between the housing and the

chip includes at least one sleeve and one area filled with a casting compound.

6. The diode, in particular the press-fit diode, as recited in one of the preceding claims,
wherein a slot or trench A having depth t is provided between the sleeve and the outer area of the base.
7. The diode, in particular the press-fit diode, as recited in Claim 6,
wherein the slot or trench A has a width b which is preferably approximately 0.5 mm.
8. The diode, in particular the press-fit diode, as recited in Claim 7,
wherein the width b is essentially uniform over the entire depth t.
9. The diode, in particular the press-fit diode, as recited in Claim 7,
wherein the width b is variable over the depth t.
10. The diode, in particular the press-fit diode, as recited in one of the preceding claims,
wherein the base 1 forms an edge 10 having a first inner diameter and an area A having a reduced inner diameter.
11. The diode, in particular the press-fit diode, as recited in one of the preceding claims,
wherein the dimensions for the variables of pedestal height a, trench depth t and height h1, h2 are selected so that they lie within presetable ranges.
12. The diode, in particular the press-fit diode, as recited in one of the preceding claims,
wherein the ratio between certain variables, for example

the ratio between trench depth t or pedestal height a and height h1 or h2, lies within presetable value ranges.

13. A method for manufacturing a diode, in particular a press-fit diode, as recited in one of the preceding claims,
wherein the diode is fixed by a notch F.
14. The method for manufacturing a diode, in particular a press-fit diode, as recited in one of the preceding claims,
wherein the sleeve 2 is fixed by mounting, the edge (10) or outer area of the elevation 9a being used for fixation, and the inner diameter of the edge 10 being selected to be slightly smaller than the outer diameter of the sheath 2, or the outer diameter of the elevation 9a being selected to be slightly larger than the inner diameter of the sleeve 2.